

We Claim:

1. A process for preparing fluorochemical
monoisocyanates comprising reacting at least one
5 fluorochemical alcohol represented by the formula
 $C_nF_{2n+1}SO_2NCH_3(CH_2)_mOH$, wherein $n = 2$ to 5 , and $m = 2$ to 4 ,
with 4,4'-diphenylmethane diisocyanate (MDI) in a solvent in
which the resulting fluorochemical monoisocyanate is not
soluble; wherein the molar ratio of fluorochemical
10 alcohol:MDI is from about 1:1 to about 1:2.5.
2. The process of claim 1 wherein $n = 2$ to 4 .
3. The process of claim 2 wherein $n = 4$.
- 15 4. The process of claim 2 wherein said fluorochemical
alcohol is selected from the group consisting of
 $C_2F_5SO_2NCH_3(CH_2)_2OH$, $C_4F_9SO_2NCH_3(CH_2)_2OH$, $C_4F_9SO_2NCH_3(CH_2)_4OH$, and
mixtures thereof.
- 20 5. The process of claim 4 wherein said fluorochemical
alcohol is selected from the group consisting of
 $C_4F_9SO_2NCH_3(CH_2)_2OH$, $C_4F_9SO_2NCH_3(CH_2)_4OH$, and mixtures thereof.
- 25 6. The process of claim 5 wherein said fluorochemical
alcohol is $C_4F_9SO_2NCH_3(CH_2)_2OH$.
7. The process of claim 1 wherein said solvent is a
nonpolar solvent.
- 30 8. The process of claim 7 wherein said solvent is a
non-aromatic hydrocarbon or halogenated solvent.

9. The process of claim 1 said solvent is selected from the group consisting of methyl nonafluoroisobutyl ether, methyl nonafluorobutyl ether, petroleum ether, n-heptane, and mixtures thereof.

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10. The process of claim 1 wherein said solvent has a solubility parameter of less than about $8.3 \text{ (cal/cm}^3)^{1/2}$ and a hydrogen bonding index of less than about 4.

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11. The process of claim 1 wherein said molar ratio of fluorochemical alcohol:MDI is from about 1:1 to about 1:2.

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12. The process of claim 11 wherein said molar ratio of fluorochemical alcohol:MDI is from about 1:1.1 to about 1:1.5.

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13. The process of claim 1 wherein said fluorochemical alcohol and said MDI are reacted in the presence of a catalyst.

14. The process of claim 13 wherein said catalyst is an organotin compound or a tertiary amine.

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15. The process of claim 14 wherein said catalyst is dibutyltin dilaurate.

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16. A fluorochemical isocyanate composition prepared by the process of claim 1 wherein said composition comprises greater than about 85% monoisocyanate.

17. The fluorochemical isocyanate composition of claim 16 wherein said composition comprises greater than about 90%

monoisocyanate.

18. The fluorochemical isocyanate composition of claim
17 wherein said composition comprises greater than about 95%
5 monoisocyanate.

19. The process of claim 1 further comprising reacting
the resulting fluorochemical monoisocyanate with a hydroxy
alkyl acrylate.
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